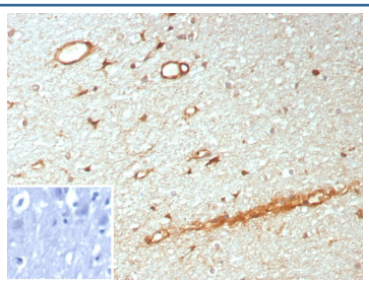
NTRK3 Antibody / Neurotrophic receptor tyrosine kinase 3 / TrkC [clone NTRK3/8796] (V5961)

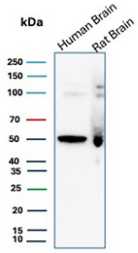
Catalog No.	Formulation	Size
V5961-100UG	0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V5961-20UG	0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug
V5961SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

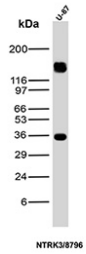
Species Reactivity	Human, Rat
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	NTRK3/8796
UniProt	Q16288
Localization	Membrane
Applications	Immunohistochemistry (FFPE): 1-2ug/ml Western Blot: 2-4ug/ml
Limitations	This NTRK3/Neurotrophic receptor tyrosine kinase 3 antibody is available for research use only.



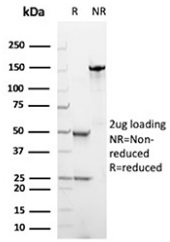
IHC staining of NTRK3/Neurotrophic receptor tyrosine kinase 3 antibody (clone NTRK3/8796). FFPE human brain tissue shows HRP-DAB brown staining in neuronal cell bodies and neuropil with membranous and cytoplasmic distribution, consistent with known expression of Neurotrophic receptor tyrosine kinase 3 in central nervous system tissue. Inset: PBS instead of primary antibody; secondary only negative control. Staining of formalin-fixed tissues requires heating tissue sections in 10mM Tris with 1mM EDTA, pH 9.0, for 45 min at 95oC followed by cooling at RT for 20 minutes.



Western Blot Analysis of NTRK3 / TrkC antibody (clone NTRK3/8796). Human brain and rat brain tissue lysates show a dominant immunoreactive band at approximately 50 kDa, with additional higher molecular weight species visible in rat brain. The predicted molecular weight of full-length TrkC is approximately 90-95 kDa; however, NTRK3 undergoes alternative splicing and proteolytic processing, generating truncated isoforms lacking portions of the intracellular kinase domain that migrate at lower apparent molecular weights. The ~50 kDa band is consistent with a truncated TrkC isoform, while the higher bands likely represent full-length and differentially glycosylated receptor species, which commonly migrate above their predicted molecular weight due to N-linked glycosylation of the extracellular domain.



Western Blot Analysis of NTRK3 / TrkC antibody (clone NTRK3/8796). U-87 human glioblastoma cell lysate shows two major immunoreactive bands at approximately 36 kDa and 130-140 kDa. The predicted molecular weight of full-length TrkC is approximately 90-95 kDa; however, extensive glycosylation of the extracellular region can shift the apparent molecular weight to 120-140 kDa on SDS-PAGE. The lower ~36 kDa band is consistent with a truncated or processed NTRK3 isoform lacking portions of the receptor, which has been reported for kinase-deficient splice variants. The presence of both higher glycosylated and lower truncated forms reflects known isoform diversity and post-translational modification of Neurotrophic receptor tyrosine kinase 3.



SDS-PAGE Analysis of Purified NTRK3/Neurotrophic receptor tyrosine kinase 3 antibody (NTRK3/8796). Confirmation of Purity and Integrity of Antibody.

Description

NTRK3 antibody, also known as Neurotrophic receptor tyrosine kinase 3 antibody, recognizes a receptor tyrosine kinase commonly referred to as TrkC and Tropomyosin receptor kinase C. The NTRK3 gene encodes a transmembrane neurotrophin receptor that belongs to the Trk family of receptor tyrosine kinases, which also includes TrkA and TrkB. NTRK3 is primarily localized to the plasma membrane, where it functions as the high-affinity receptor for neurotrophin-3 (NT-3), and it can undergo ligand-induced internalization to endosomal compartments during signal transduction. Physiologically, NTRK3 plays a critical role in neuronal survival, differentiation, axonal growth, and synaptic plasticity, particularly during embryonic and postnatal development of the peripheral and central nervous systems.

Upon NT-3 binding, TrkC undergoes receptor dimerization and autophosphorylation within its intracellular kinase domain, activating downstream signaling cascades including the MAPK-ERK pathway, PI3K-AKT pathway, and PLC-gamma signaling. These pathways regulate gene expression programs involved in cell survival, neurite outgrowth, and cytoskeletal organization. Structurally, the receptor contains extracellular leucine-rich and immunoglobulin-like domains responsible for ligand binding, a single transmembrane region, and a cytoplasmic tyrosine kinase domain that mediates phosphorylation-dependent recruitment of adaptor proteins. The human NTRK3 gene is located on chromosome 15 and undergoes alternative splicing, generating isoforms with differences in signaling capacity and regulatory interactions.

In oncology, NTRK3 has gained substantial attention due to chromosomal rearrangements that generate oncogenic NTRK3 fusion proteins with constitutive kinase activity. Such fusions are detected in multiple tumor types and represent clinically actionable targets for TRK inhibitor therapies. In addition to gene fusions, altered expression of Neurotrophic receptor tyrosine kinase 3 has been studied in breast, thyroid, and other cancers, where context-dependent roles in tumor progression and differentiation have been reported. Clone NTRK3/8796 is designed to detect TrkC in research

applications and is suitable for evaluating NTRK3 expression patterns in normal and neoplastic tissues. An NTRK3 antibody can be used to assess receptor distribution and relative expression in relevant experimental systems for life science research.

Application Notes

Optimal dilution of the NTRK3/Neurotrophic receptor tyrosine kinase 3 antibody should be determined by the researcher.

Immunogen

A recombinant fragment (around amino acids 100-300) of human NTRK3 protein (exact sequence is proprietary) was used as the immunogen for the NTRK3/Neurotrophic receptor tyrosine kinase 3 antibody.

Storage

NTRK3/Neurotrophic receptor tyrosine kinase 3 antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

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